

Take out graph paper

5.3 Writing Linear Equations Given 2 Points

To write an equation with 2 points:

1. Find m: $\frac{y_2 - y_1}{x_2 - x_1}$

2. Find b:

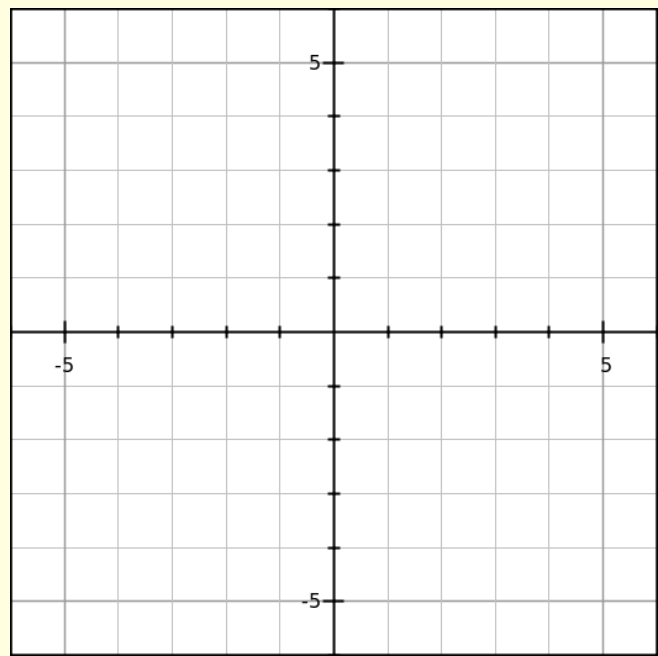
- 1. Pick 1 ordered pair (x,y)**
- 2. Substitute m, x, & y into $y = mx + b$**
- 3. Solve for b**

3. Write equation

**Substitute m (from step 1) & b (from step 2)
into $y = mx + b$**

Graph the ordered pairs AND write an equation of a line that passes through the two points:

1. $(-3, 1)$ & $(5, 5)$

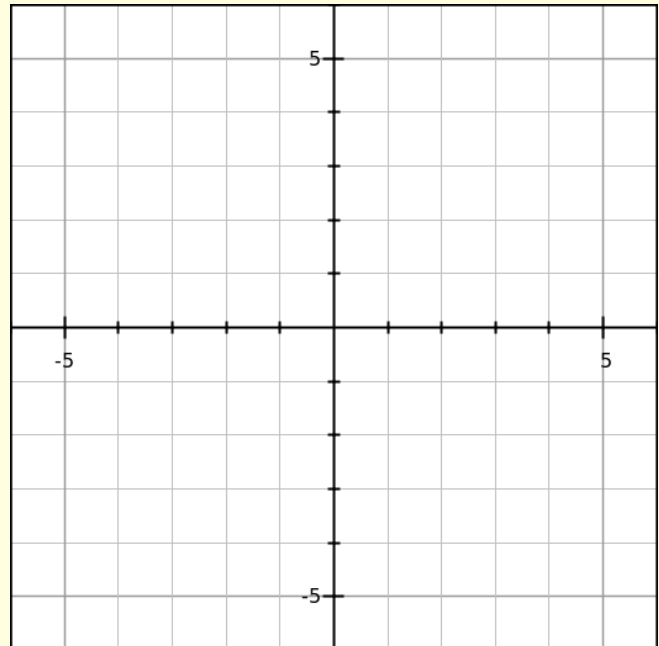


**HINT: Use your graph to check your equation....
DOES YOUR EQUATION MATCH YOUR GRAPH??**

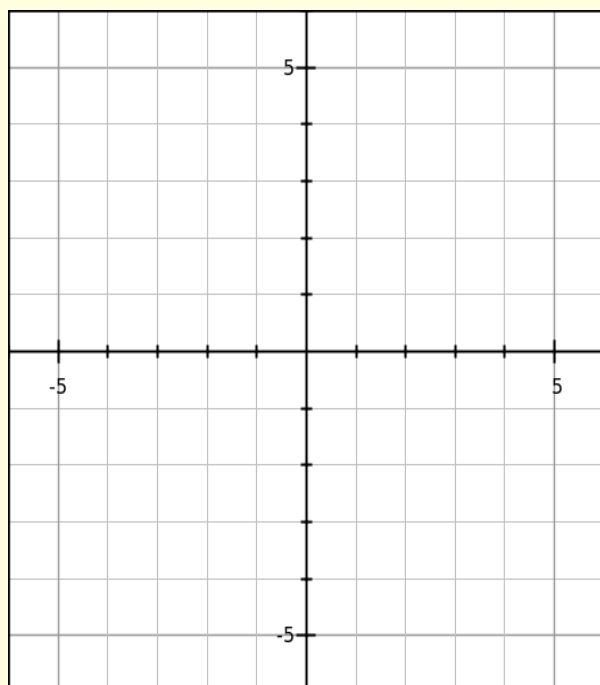
When writing the equation, Girls- pick the first ordered pair & Boys-pick the second ordered pair Let's see if the equations match??



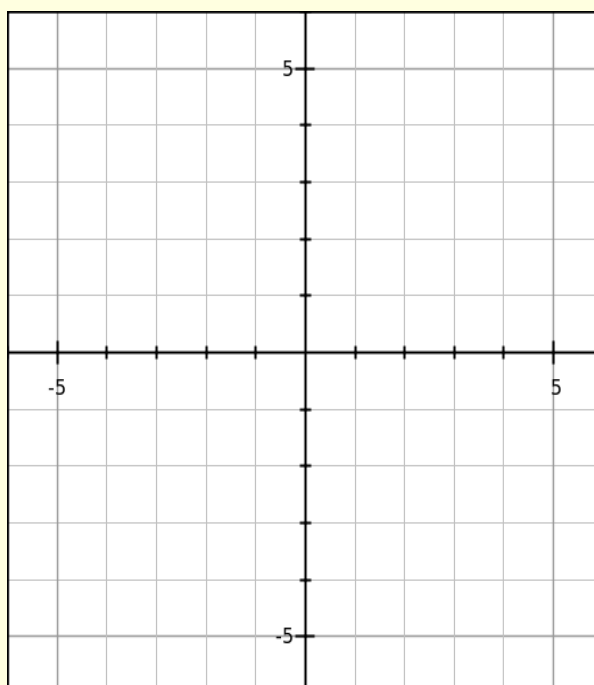
2. $(3, -2)$ & $(-6, 4)$



3. $(6, 2) \in (-3, 2)$



4. $(-2, 5) \in (-2, -4)$



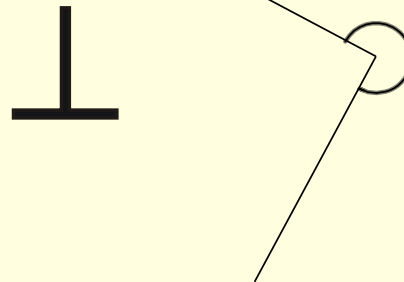
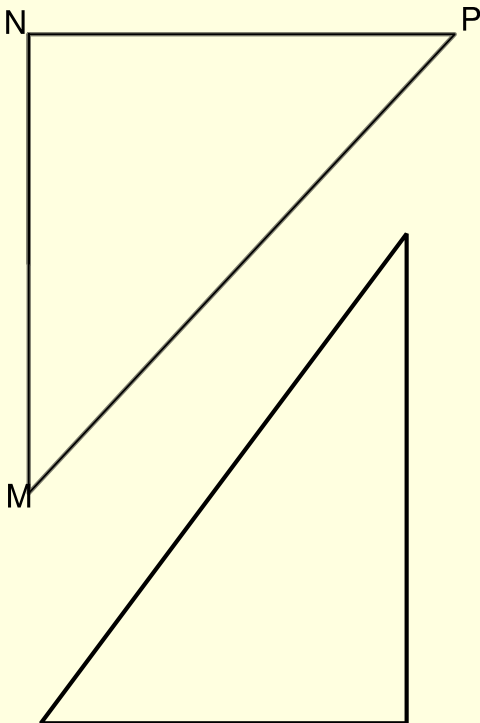
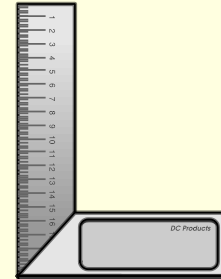
Perpendicular Lines....

What do they look like?

Is there anything in the room that resembles perpendicular lines?

Perpendicular Lines:

* slopes are **OPPOSITE RECIPROCALS**



Find the slope that is perpendicular to the following equation:

5. $y = -2x + 15$

6. $y = \frac{3}{4}x - 1$

Write the equation of a line that goes through (0, 4) and is perpendicular to $y = -\frac{1}{2}x + 6$.